



THE OBJECTS OF THE SOCIETY FOR FREEDOM IN SCIENCE

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I

During the last two decades there has developed a school of thought that attacks the conception of science as a search for truth and denies the right to free research directed solely to that end. Three contentions underlie this movement:—

(1) Science had its origin in efforts to satisfy the material needs and desires of ordinary human life.

(2) The legitimate purpose of science is to meet these material needs and desires on an expanding scale.

(3) Scientists cannot be left free to choose their own subjects of research, but must submit to central planning so that their work will be specifically devoted to the satisfaction of human material needs and desires.

In this movement pure science is actually derided and compared in value with the solution of crossword puzzles.*

These doctrines gained currency in Great Britain as a result of the visit of the Soviet delegation to the International Congress on the History of Science held in London in 1931. The effect of the new movement was already apparent at the Leicester meeting of

* Bernal, J. D., 1939. *The Social Function of Science*. (Routledge, London.) The reference to crossword puzzles is on p. 97.

the British Association in 1933. The Association's new outlook was reflected in Sir Frederick Gowland Hopkins's Presidential Address. As he said himself, "You may feel that throughout this address I have dwelt exclusively on the material benefits of science to the neglect of its cultural value." The movement first began to become really powerful in 1936, when the economist, Sir Josiah Stamp (later Lord Stamp), gave the Presidential Address to the British Association at Blackpool. For some years it looked as though the case of those who believe in pure science and freedom in science would go by default, through their continued neglect to state their own point of view. Prof. J. D. Bernal's book, *The Social Function of Science* (1939), became a keystone of the movement against free science. Certain scientific journalists joined the movement and spread its propaganda. The Association of Scientific Workers adopted the movement as a part of its policy, and has worked energetically on its behalf ever since, both privately and in public. Much publicity has been given to some of the meetings of the A.Sc.W., and the popular press has reported its deliberations as though they represented the voice of the general body of scientists. The movement against freedom in science continued to be associated with Marxist politics.

In 1938 the British Association founded a new Division, called "The Division for the Social and International Relations of Science," in which the voices of those who were opposed to pure science and to freedom in science were at first particularly prominent. At a large and much-publicized meeting held at the Royal Institution, London, in September 1941, the new movement reached its climax. Pure science was

derided; reasoned argument was replaced by sarcasm and objectivity by prejudice. No one was given the opportunity to speak during the three days of the conference except those previously invited by the organisers, and only two voices were raised against the prevailing trend—those of Prof. A. V. Hill and Prof. M. Born.

II

Until the end of the 'thirties nothing was done to oppose the new movement apart from the publication of a few articles and the making of an occasional speech. Many scientists were disquieted, but not alarmed. There was little realization that the power of influencing public opinion was tending to pass from the hands of those who believed in pure science and freedom in science into the hands of those who did not. It was not until 1939 that a comprehensive and considered reply was made, in the form of Prof. M. Polanyi's *Rights and Duties of Science*,† in which Prof. Bernal's book was examined and the arguments contained in it answered.

In 1940 a letter was sent to 49 scientists, suggesting the formation of a new society to promote the causes of pure science and of freedom in science. A group of thirty was thus formed, and this became the nucleus of the Society for Freedom in Science. It may be remarked that conditions can be imagined under which the attempt would be made to foster pure science, while freedom of choice in subjects of research would be denied to the individual scientist. Nevertheless,

† Polanyi, M., 1939. *Rights and Duties of Science*. (Manch. Sch. Econ. Soc. Stud., Oct., p. 175.) Republished in 1945 as Occasional Pamphlet No. 2 of The Society for Freedom in Science.

it is a fact of experience that those who value pure science highly are commonly those who also value freedom in science, and thus it came about that a small natural group of like-minded people was formed.

A few of the original members who were seriously alarmed by the trend of events in the scientific world met together to draft a document which would draw attention to what was happening and would form a basis for a larger Society consisting of those scientists who were willing to support a movement for the defence of scientific freedom. This document was circulated in May and June 1941. It contained the following five propositions:—

(1) The increase of knowledge by scientific research of all kinds and the maintenance and spread of scientific culture have an independent and primary human value.

(2) Science can only flourish and therefore can only confer the maximum cultural and practical benefits on society when research is conducted in an atmosphere of freedom.

(3) Scientific life should be autonomous and not subject to outside control in the appointment of personnel or in the allocation of the funds assigned by society to science.

(4) The conditions of appointment of research workers at universities should give them freedom to choose their own problems within their subjects and to work separately or in collaboration as they may prefer. Controlled team-work, essential for some problems, is out of place in others. Some people work best singly, others in teams, and provision should be made for both types.

(5) Scientists in countries not under dictatorial rule should co-operate to maintain the freedom necessary for effective work and to help fellow-scientists in all parts of the world to maintain or secure this freedom.

III

The Society for Freedom in Science is an informal body, with no rules and no regular subscription. The first Committee was self-appointed and provisional, but elections have since been held and the present Committee consists of the following:—Dr J. R. Baker, Prof. V. H. Blackman, F.R.S., Mr R. Brown, Prof. J. A. Crowther, Prof. M. Polanyi, F.R.S., Dr L. E. Sutton, and Prof. A. G. Tansley, F.R.S. Dr Baker, Prof. Crowther and Prof. Tansley constitute the Executive Committee. Prof. P. W. Bridgman represents the Committee in the U.S.A. The Society has no official President.

A general meeting was held in London on 2nd July, 1942, but the Society's business has mainly been transacted by correspondence and by the circulation of typewritten and printed papers. The present membership is 457, of whom 230 reside in Great Britain, 176 in the U.S.A., 38 in the British Dominions and Colonies, and 13 elsewhere. The great majority are members of the scientific staffs of universities and other institutions at which research is carried on. The Committee has made connexion with like-minded people attached to other intellectual pursuits, by drawing into membership several distinguished philosophers and historians, who form a valuable link with a wider field of ideas. The Society is non-political in the sense of including members who are socialists, liberals and conservatives, but it is openly opposed to totalitarianism of all kinds in science.

IV

The main function of the Society is to form a solid body of opinion ready to present the case for freedom if the threat to suppress scientific liberties should develop dangerously during the period of post-war reconstruction. Those who lay all the stress on the applications of science and consider that research should be centrally planned are not only highly organized and extremely active, but also influential in certain political circles. Only a state of preparedness can make it certain that the case for freedom in science will get a proper hearing if and when such a crisis arises.

Meanwhile, the Society develops its case by fostering the publication of books, articles and letters on the subject, and circulating some of these among its members and among others who seem likely to be interested. The question whether scientific research flourishes best under central planning is only part of the wider subject of scientific method in a broad sense. By stimulating thought and discussion about these matters, the proponents of planned research have actually performed a service. The Society supports the publication of articles on scientific method and on the philosophy of science, so far as these bear upon the subjects in which it is interested. The official publications of the Society are a series of "Occasional Pamphlets", of which four have so far been published. A list of the books and papers published under the auspices of the Society is given at the end of this pamphlet.

It is believed to be better to concentrate on limited objectives rather than to make feeble efforts over too wide a range. The securing of freedom in the choice

of subjects of research for members of the staffs of universities is considered one of the most essential of these limited objectives. In many university departments there is already considerable freedom, even in universities whose statutes do not grant it. In such cases the Society wishes to conserve what it considers good, against the whole trend of totalitarianism which is so influential in the modern world. In some departments, however, the newcomer is expected to join a team already engaged on a definite scheme of research. In many cases newcomers are well fitted and perfectly willing to follow such a course and their freedom is therefore not compromised. But room should always be found in a department for independent investigation, on any subject within the scope of the department, by members of the staff who desire to choose their own subjects and are qualified to pursue them. It is recognised, of course, that freedom must necessarily be limited by the funds and apparatus available in the department in which the research is done.

It is felt that if freedom can be attained and maintained in universities, the effect of that freedom will be felt over a much wider field. It is held to be essential to the well-being and progress of science at large that those who desire and are qualified to undertake independent research should be given opportunity to do so.

The Society fully recognises that owing to the complexity of modern science, organized team-work is often necessary; and it is inevitable that a considerable proportion of the funds assigned to research should go to the support of such work. But substantial sums should also be made available for qualified individual investigators, whose independent discoveries often lead

to the most important advances in knowledge and in technique. It goes almost without saying that the Society is strongly in favour of the spontaneous collaboration which so often arises from the free discussion of their problems and interests by those trained in different branches of science. This is probably the most fruitful of all kinds of collaboration.

It is no part of the Society's policy to insist that every man or woman who has been appointed to a research post should be allowed, at the expense of the community, to occupy himself or herself indefinitely with trivial investigations. This however is a difficult question, because the opinion of scientists may differ as to what is trivial and what is not. It may be suggested that the pressure of the public opinion of his colleagues is likely to be sufficient to deter a scientist from the indefinite pursuit of researches which are regarded by those colleagues as of little importance in the advancement of science. In so personal a matter as independent research a large amount of individual freedom is essential, but the individual investigator ought not to escape, and in fact cannot ultimately escape, the judgment of his colleagues. He must be given the maximum freedom possible, and it is suggested that no pressure should be put upon him, except in the most extreme cases, other than the inevitable moral pressure of the opinion of his colleagues; and scientists should recollect that young colleagues are often as likely to have useful opinions on scientific values as their elders.

V

The Society has already had considerable influence. The totalitarian view does not now go unanswered,

whether in conversation or in print, as it so often did in the 'thirties. There is an awareness of the existence of strongly-held opinion contrary to the totalitarian view.

Although the movement which the Society opposes was Marxist in origin, yet the Soviet authorities no longer maintain the same views. Two distinguished Soviet scientists, Prof. P. L. Kapitsa and Prof. A. Joffe, have published statements that show remarkable resemblances to the views upheld by the Society. The opposition to the Society by communists has greatly relaxed. At the meeting of the British Association's Division for the Social and International Relations of Science held in London in December, 1945, the Society's views, as put forward by Prof. M. Polanyi, Prof. A. G. Tansley and Dr J. R. Baker, went almost unchallenged.

Nevertheless, it remains necessary to re-examine and to reassert publicly the foundations of academic freedom. The B.B.C. has for long given far easier access to the microphone to those who support the totalitarian outlook on science than to members of our movement. Some of the British daily newspapers also urge the totalitarian view through the medium of their scientific correspondents. Contemporary history has taught us that the struggle for freedom must never cease. Essential liberties which seemed permanently established throughout the civilised world even a generation ago are today called in question over large parts of Europe and all freedom has become basically uncertain everywhere. Today, therefore, the upholders of academic freedom must actively declare and expound their faith, lest they become partly responsible for the peril of freedom.

VI

Membership of the Society is open to every established scientist who is in substantial agreement with the five propositions printed on pp. 4-5. It is thought desirable to increase the membership of the Society, and especially to introduce scientists on the Continent of Europe into our movement. Those who wish to join the Society should complete an enrolment form and send it to the Secretary (Dr J. R. Baker, University Museum, Oxford). Members are under no obligation except that of supporting the cause of freedom in science. Nearly all members, however, make a donation on joining. The amounts have varied widely, but £1 and \$5 are the most usual sums. Cheques should be made payable to The Society for Freedom in Science. Properly audited accounts are circulated annually. Members receive all the publications of the Society as they appear, free of charge.

VII

The following are the official publications of the Society:

Proposed Society for Freedom in Science. 1941. (The nucleus of the Society had already been established the year before this pamphlet was published.)

The objects of the Society for Freedom in Science.
First edition, 1944; second edition, 1946.

Occasional Pamphlets of the Society for Freedom in Science:

No. 1. *Is the progress of science controlled by the material wants of man?* By F. Sherwood Taylor. 1945. 1/6.

No. 2. *Rights and duties of science.* By M. Polanyi. 1945. 1/9.

No. 3. *Free science.* By Warren Weaver. 1945. 4d.

No. 4. *The planning of science.* By M. Polanyi. 1946. 1/6.

The following books and papers have been published by members of the Society in support of the cause for which the Society stands. (Very short articles and letters to journals are not included in this list.)

Baker, J. R. 1939. *Counterblast to Bernalism*. New Statesman and Nation, 29th July, 1939, p. 174.

Baker, J. R. 1942. *The scientist and the community*. Electronic Engineering, 15, No. 175.

Baker, J. R. 1942. *The scientific life*. Allen and Unwin, London (7/6). Also published by Macmillan, New York.

Baker, J. R. 1945. *Science and the planned state*. Allen and Unwin, London (7/6). Also published by Macmillan, New York. (French and German editions are being prepared in France and Switzerland.)

Bridgman, P. W. 1943. *Science, and its changing social environment*. Science, 97, p. 147.

Marshall, R. C. 1943. *Astronomy in the service of culture*. Popular Astronomy, 51, 1.

Polanyi, M. 1943. *The autonomy of science*. Memoirs and Proceedings of the Manchester Literary and Philosophical Society, 85, 19. Reprinted in The Scientific Monthly, Feb. 1945, p. 141.

Polanyi, M. 1944. *Science—its reality and freedom*. The Nineteenth Century and After, 135, 78.

Tansley, A. G. 1942. *The values of science to humanity*. (Herbert Spencer Lecture, 1942.) Allen and Unwin (1/6).

Trueman, A. E. 1943. *Science and the future*. The British Way Pamphlets, No. 7. Craig and Wilson, Glasgow (1/-).

